SMS Gateway

HTTP API

Rev 3.6

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Introduction:

TraiTel Telecommunications offers a simple HTTP API to developers seeking to integrate SMS delivery capabilities into their applications. The gateway is available in both secure and non-secure formats.

This gateway provides two main functions:

1) Sending a single SMS and immediately receiving the result.
2) Sending a batch file of SMS messages, and polling for results *and replies*.

Usage:

TraiTel offers both a secure and a non-secure gateway. The secure gateway can be accessed via the following URL:

> *https://api.traitel.com.au/smsgateway.pl*

The non-secure gateway can also be accessed via the following URL:

> *http://api.traitel.com/smsgateway.pl*

There are redundant gateways for both the secure and non-secure gateway. These gateways may be reached if a connection error occurs with a primary gateway. TraiTel **strongly recommends** configuring your application to access the redundant gateways when, and only when, a connection attempt to the primary gateway fails. These gateways are located at:

> Non-secure: *http://api2.traitel.com/smsgateway.pl*

> Secure: *https://api2.traitel.com.au/smsgateway.pl*

The gateway can accept parameters from both 'GET' and 'POST' requests. However, in certain modes, 'POST' will be required.

Two parameters are required regardless of the action requested via the gateway. These two parameters **must** be present in every request to the gateway. They are the following:

user *Your TraiTel account username*

pass *Your TraiTel account password*

If these parameters are missing or invalid, your request will not be processed.

Example GET request:
http://api.traitel.com/smsgateway.pl?user=mystore&pass=123

Single-SMS mode:

By default, the SMS gateway operates in Single-SMS mode. That is, it will accept and deliver one SMS per HTTP call. The result (message accepted, total cost) will be returned to the caller. This mode of operation provides a quick and easy way to send single SMSs.   However, it does not provide additional functionality such as polling the delivery status of your message. This function is only available in *batch mode*.

In addition to 'user' and 'pass', the Single-SMS mode requires two parameters:

to *The destination mobile number(s), International format.*

message *The message to be delivered*

Example:

http://api.traitel.com/smsgateway.pl?user=me&pass=123&to=61408123456&message=Hello

The 'to' field may contain up to 10 destination numbers. To specify multiple destination numbers, simply separate each number with a comma.

The Single-SMS mode also includes three optional parameters:

replyto	*Specify the originating / reply-to number of the message.*
subid	*Send the SMS from a specific sub-account.*
output	*Set to 'verbose' for a detailed response.* ***This must be specified when requesting delivery status notifications.***

If specified, the 'replyto' field must contain an international mobile number to where replies may be sent. This number will appear on the receiving mobile as the originating number. Example:

http://api.traitel.com/...............&replyto=614023332245

Please note that the 'replyto' option *is only available by request*. Please contact TraiTel Telecommunications to activate this feature on your account.

The 'subid' field is available for sub-account users. The SMS message will be sent from the sub-account specified by the specified ID number. This ID number is available on the 'Sub-Accounts' page in Web-Messaging (under 'Settings'). It is listed as the "API ID" under the "Existing Sub-Accounts" table.

When setting 'output' to 'verbose', this API will respond with a CSV formatted list of all messages accepted, errors, and a final summary. This response is far more informative and is recommended for all usage. The verbose response will also include a unique Tracking Number which will be used when requesting Delivery Status Notifications.

Single-SMS mode standard output:

When using standard output, once your request has been processed, you will receive one **or more** of the following replies. Each message is terminated with a new-line character '\n'. See the next page for the *verbose* output format.

Error: Authentication failed.

Your username or password is invalid.

Error: Out of credit. ## SMS messages sent

Your TraiTel account balance is too low to send anymore SMS messages.

Note: ## is replaced by the number of SMS messages actually sent.

Error: Sorry, this service is currently disabled on your account. To enable it, please contact TraiTel via email or phone.

SMS functionality has temporarily been disabled in your account.

Error: SMS's cannot be sent to premium numbers or non-mobile numbers.

The number to which your message was destined is not a valid mobile number.

Ok: ## SMS messages accepted for delivery. Charge: $ ##.## (includes GST)

Your message has been accepted for delivery. The number of messages actually accepted will appear, as well as the total amount charged for the delivery.

Single-SMS mode verbose output:

In Verbose mode, a CSV formatted list will be sent back to your client, containing details of your SMS delivery. The output will be a series of comma-separated fields, in the following order:

Result, Destination Number, TraiTel ID, Job ID, Key ID, Cost, Details

Please note: When using 'verbose' output, your application must be prepared to accept more fields than those listed above. New fields will always be appended to the end of the list. In the event that a new field is added, your application should ignore the field. Your application must also ignore any 'Result' value that is not documented below, or that may be added in the future.

Field description:

Result: *This field will contain one of the following values: error, accepted, rejected, summary. 'error' indicates a system error, such as failure to login, insufficient funds, etc. When an error occurs, your application should log the error and notify you of it, as you will likely not be able to continue using the service until the error has been resolved. 'accepted' indicates that the SMS in question has been accepted for delivery. 'rejected' indicates that a particular destination number has been rejected. 'summary' will appear at the end of each request, unless a fatal error occurred prior to sending any SMS messages.*

Destination Number: *A mobile number that is either 'accepted' or 'rejected'*

TraiTel ID: *A unique ID generated by TraiTel for Delivery Status Notifications*

Job ID: *Not applicable to single-SMS mode*

Key ID: *Not applicable to single-SMS mode*

Cost: *The cost of this particular SMS*

Details:	*Either details of an Error (i.e. insufficient funds), or a summary message. The summary message will indicate the number of SMS's accepted, and the total cost of the delivery.*

Sample output:

```
accepted,614123456,4100000,,,0.10,
```

```
summary,,,,,,1 SMS messages accepted for delivery.  Charge: $
0.10 (includes GST)
```

Restrictions on messages and message-length:

Each message cannot exceed 160 characters in length. This limit includes 'spaces' and new-lines.   If a message exceeding 160 characters is received, it will be divided into two or more messages, each shorter or equal to 160 characters in length. You will be charged per message part.

For example, if a message measuring 350 characters is sent, it will be divided into 3 SMS's. The first two will be 160 characters long, and the third will be 30 characters long. You will be charged for 3 SMS messages.

Special symbols and characters from foreign alphabets are accepted but not supported. Messages may only contain characters from the English alphabet. Acceptable characters are: A through z, 0 through 9, spaces, and normal punctuation. The gateway will accept messages containing unsupported characters; however, no guarantee can be made in regards to the delivery of the SMS, and the integrity of the message.

The 160 character limitation applies to **non-concatenated** SMS. For more information on concatenated SMS, please see below.

Message Formatting:

 TraiTel's SMS gateway offers two additional settings that will affect the presentation and formatting of a message on a remote mobile.

 The first option is **concatenation**. When sending a message longer than 160 characters, it is possible to re-assemble the message on the remote mobile so

that it appears as a single message. This is the process referred to as 'concatenation'.

To enable concatenation, add the following value pair to your HTTP query:

concatenate=true

When using concatenation, it is important to note that you will still be charged per part. When using concatenation, the character limit is reduced to 153 characters per message, *if the message exceeds 160 characters*, in order to include re-assembly information within the SMS. Messages up to 160 characters will still be sent as one message even when concatenate=true.

The second formatting option offered by TraiTel's SMS gateway is the **Unicode** Character Set.

The default SMS alphabet is only suitable for latin derived languages, such as English, French and Spanish. The Unicode character set may be used when the default alphabet is not suitable for any given language. If an SMS message requires the unicode formatting, add the following value pair to your HTTP query:

unicode=true

In addition, in your HTTP request, your SMS message must be formatted as a Hexadecimal string, where each unicode character is represented by four hexadecimal characters.

For example, "Hello World!" should appear as

message=00480065006C006C006F00200077006F0072006C00640021

When in Unicode mode, the message length limitations for both concatenated, and non-concatenated messages change. Non-concatenated messages are limited to 70 unicode characters. When concatenation is enabled, this limit decreases to 67.

Please note that TraiTel does not support the UTF-8 encoding. Messages formatted as UTF-8 will be sent, but will not appear as expected on the remote mobile.

Accepted number format:

The International mobile number format must be used when delivering SMS messages. The mobile number:

- Must begin with the proper country code:

61 for Australia, 1 for USA and Canada, 64 for New Zealand

- Must **not** contain any symbols nor spaces

- Must **not** contain leading 0s (zeros)

For example, the following formats are accepted:

61401234567	*Valid Australian Mobile Number*
17115551234	*Valid N. American Mobile Number*

The following formats **are not accepted**:

0401234567	*Invalid: Missing country code*
61**0**401234567	*Invalid: Leading '0' on the area code*
+61 401234567	*Invalid: Contains extra symbols and spaces*

Note that destination numbers **will be accepted** as valid numbers even when they contain symbols or do not contain the proper country code.

For example, the Australian mobile destination: *401234567*

This message may be intended for a recipient within Australia. However, since the Australian country code '61' does not appear at the beginning of the mobile number, '40' will be treated as the country code for this destination. The message will be delivered to Romania.

Batch-Mode:

The SMS Gateway can be used in 'batch' mode to send large amounts of SMS messages, to track the delivery status of the messages, and to receive replies to those messages.

Preparing a delivery file:

In order to use the gateway in batch mode, your application must create a simple text file containing each destination number, and the message to deliver. The text file must be formatted as follows:

```
Destination Number,Message
Destination Number,Message
```

Each line of the file must be terminated by a single new-line character '\n'. The Destination Number and Message must be formatted according to the guidelines provided on the previous page.

For example:

```
614023224562,Do not forget your appointment at 2:00 PM
614001223456,Do not forget your appointment at 4:00 PM
```

Submitting a batch file:

In order to submit a batch file, an HTTP POST call must be made to the gateway. This is the only request which **must** be submitted via HTTP POST.

The request must contain the following parameters:

user	*Your TraiTel account username*
pass	*Your TraiTel account password*
file	*The batch file*
mode=job	*Indicates that you are submitting an SMS job.* *must be set to 'job'**
output	*Specify 'verbose' to receive the status of each SMS as well as Tracking IDs for Delivery Status Notifications*

For example, the following HTML form will properly submit a job to the SMS Gateway:

```
<form method=post
action="http://www.traitel.com.au/smsgateway.pl"
     ENCTYPE="multipart/form-data">
Username: <input type=text name="user" value=""><br>
Password: <input type=password name="pass" value=""><br>
File: <input type=file name="file" ><br>
<input type=submit value="Send"><br>
<input type=hidden name="mode" value="job">
</form>
```

Private Keys in batch-mode:

In order to facilitate tracking the delivery status of SMS messages, it is possible to include a numeric key with each SMS in a batch file. These keys are for personal use only; they will not alter SMS messages nor impact the delivery of each message.

To use the gateway's Batch-Mode with Private Keys enabled, you must add to each request (status, update, job), the following CGI parameter:

key=yes

When Private-Keys are enabled, the batch-file format, and the results page format will change. In both cases, an additional field, "Key", must appear immediately after the International Mobile Number.

The batch-file must be formatted as follows:

```
Destination Number,Key,Message
Destination Number,Key,Message
Destination Number,Key,Message
```

Likewise, the pages resulting from a 'Status' or 'Update' call will be formatted as follows:

```
Destination,Key,Status,Tries,Reply Available,Reply
########,###,xxxxxx,####,xxxx,xxx
########,###,xxxxxx,####,xxxx,xxx
########,###,xxxxxx,####,xxxx,xxx
…
```

Each Key provided in the batch-file will be returned with its respective entry in the 'Status' and 'Update' result pages.

The Key **must** be a numeric value greater than zero. Alphanumeric keys and negative keys cannot be used.   Keys are stored as signed 32 bit integer values. The maximum value permitted is: 2 147 483 647. When alphanumeric keys are provided, the request will still be accepted for delivery; the key values stored by TraiTel are undefined.

When submitting a batch job, it is important to specify, using the key=yes parameter, whether or not private keys are provided in the batch file. Incorrectly formatted batch-files may still be accepted for delivery. TraiTel provides no guarantee as to the integrity of the content of messages being delivered.

Batch mode standard output:

After receiving and processing your request, the gateway will reply with one or more of the following messages:

`Error: Authentication failed.`
> Your username or password is invalid.

`Error: Out of credit.  ## SMS messages sent`
> Your TraiTel account balance is too low to send anymore SMS messages.
> Note: ## is replaced by the amount of SMS messages actually sent.

`Error: Sorry, this service is currently disabled on your account. To enable it, please contact TraiTel via email or phone.`
> SMS functionality has temporarily been disabled in your account.

`Error: SMS's cannot be sent to premium numbers or non-mobile numbers.\n`
> The number to which your message was destined is not a valid mobile number.

`Ok: ## SMS messages accepted for delivery.  Charge: $ ##.## (includes GST)`
> Your messages have been accepted for delivery. The number of messages actually accepted will appear, as well as the total amount charged for the delivery.

`Job-ID: ####`
> A Unique ID number which can be used to poll the status of your batch delivery.

Batch mode verbose output:

In Verbose mode, a CSV formatted list will be sent back to your client, containing details of your SMS delivery. The output will be a series of comma-separated fields, in the following order:

Result, Destination Number, TraiTel ID, Job ID, Key ID, Cost, Details

Please note: When using 'verbose' output, your application must be prepared to accept more fields than those listed above. New fields will always be appended to the end of the list. In the event that a new field is added, your application should ignore the field. Your application must also ignore any 'Result' value that is not documented below, or that may be added in the future.

Field description:

Result: *This field will contain one of the following values: error, accepted, rejected, summary. 'error' indicates a system error, such as failure to login, insufficient funds, etc. When an error occurs, your application should log the error and notify you of it, as you will likely not be able to continue using the service until the error has been resolved. 'accepted' indicates that the SMS in question has been accepted for delivery. 'rejected' indicates that a particular destination number has been rejected. 'summary' will appear at the end of each request, unless a fatal error occurred prior to sending any SMS messages.*

Destination Number: *A mobile number that is either 'accepted' or 'rejected'*

TraiTel ID: *A unique ID generated by TraiTel for Delivery Status Notifications*

Job ID: *A unique ID generated by TraiTel identifying the entire broadcast*

Key ID: *The optional 'Key' value specified in the submitted CSV, echoed.*

Cost: *The cost of this particular SMS*

Details: *Either details of an error (i.e. insufficient funds), or a summary message. The summary message will indicate the number of SMSs accepted, and the total cost of the delivery.*

Sample output:

```
accepted,614123456,4100000,8100,1,0.10,
summary,,,,,,1 SMS messages accepted for delivery.  Charge: $
0.10 (includes GST)
```

Checking a job's status:

The Gateway provides two methods of retrieving a job's status or result. The first is a complete list of destination numbers and their current status, and the second is a cumulative list. When requesting the cumulative list, only destinations for which the status has changed since the last request will be returned.

The HTTP request can be made using either GET or POST, and requires the following parameters:

user	*Your TraiTel account username*
pass	*Your TraiTel account password*
jobid	*The ID # of the job, given after submitting a job*
mode	*Select the type of list you wish to receive*

Set 'mode' to 'status' if you wish to receive the full list of destinations, and their current status. Set 'mode' to 'update' to receive the cumulative list; that is, the list of destinations for which the status has changed since your last 'update' request. If there was an error in your request, the gateway will reply with either of the following:

```
Error: Authentication failed.
Error: The job ID specified is invalid
```

Upon success, the list will be returned in the following format:

Destination,Status,Tries,Reply Available,Reply
########,xxxxxx,####,xxxx,xxx
########,xxxxxx,####,xxxx,xxx

Each line is terminated by a single new-line character '\n'.

Columns:	Meaning:
Destination	The destination mobile number
Status	The current delivery status:
	Pending: has not been delivered yet
	Success: has been delivered
	Failed: cannot be delivered
Tries	The number of times delivery was attempted
Reply Available	'Yes' if a reply has been received, 'No' otherwise
Reply	The message received in the reply

HTTP Reply Forwarding:

The 'HTTP Reply Forwarding' feature enables you to receive replies to your SMS messages directly to a script on your HTTP server. In order to receive replies, you will need to create a script on your HTTP server. SMS Replies will be submitted to that script via HTTP GET, having the following variables:

subidapi: *The sub-account API ID associated with the reply, if any.*

number: *The mobile number of the sender, in international format.*

account: *The account which is receiving the SMS message.*

message: *The reply sent.*

job_id: *The Job ID # when delivered using batch mode*

key_id: *The Unique Key used when delivered using batch mode*

currentpart: *The current SMS in this message (starting from1, will only be greater than 1 in the case of a multipart message)*

totalparts: *The total number of SMS in this message (>1=multi-part)*

reference: *The reference number for this multi-part message. This can be any value between 0 and 255. Will be 0 for a normal single SMS. Each part of a multi-part message will have the same reference number. This number is sent as it is received from the SMSC (i.e. it is not generated by TraiTel, but by the sender)*

verification_id=a.b.c.d: *where a,b,c and d are numeric values. This ID should be stored as a single string as it will need to be sent back to TraiTel exactly as it has been received.*

Upon receipt, the client may request verification from TraiTel by sending the same ID as a value in the following URL:

http://api.traitel.com/sms_in_verify.cgi?id=a.b.c.d

OR if a secure connection is required,

https://www.traitel.com.au/sms_in_verify.cgi?id=a.b.c.d

The verification script will reply with one of the following upon failure:

"Invalid request" will be sent when no ID has been provided, or an invalid ID format been provided

"Invalid ID" will be sent when an ID cannot be found (i.e., it is a valid format but does not exist)

Upon success, an MD5 checksum in lowercase hexadecimal will be sent, such as the following

7a6a3035886e4d21737072faab56318f

The MD5 value can be calculated by passing the exact value sent as the "message" value in the original GET request, decoded, to an MD5 function. If the MD5 value matches calculated by the user matches that sent by sms_in_verification.cgi, then the message is valid.

The verification IDs expire after 7 days.

unicode: *value either 'yes or 'no'. If yes, the message will be encoded in hexadecimal, where each unicode character is represented by four hexadecimal characters.*

 For example, "Hello World!" would appear as

00480065006C006C006F00200077006F0072006C00640021

When in Unicode mode, the message length limitations for both concatenated, and non-concatenated messages change. Non-concatenated messages are limited to 70 unicode characters. When concatenation is enabled, this limit decreases to 67.

recipient=614xxxxxxxx: *users with dedicated inbound SMS numbers will receive this additional value, which identifies which dedicated inbound SMS number received the SMS. The value will be present for every SMS received by a dedicated number, but will not be present for any standard SMS replies.*

In order to enable this feature, log in to your Web-Messaging account via http://www.traitel.com.au/, and, under 'Developers', select 'SMS via HTTP Settings'. On the SMS via HTTP page, click 'SMS Reply Forwarding'. There specify the full URL to your HTTP script. For example: http://www.yourdomain.com/script.cgi .

Your script can be written in any scripting language that can process HTTP GET requests, such as Perl, PHP and ASP.

In order to receive replies to your SMS messages, you must be subscribed to the SMS Receiving service, and you must select "Send replies to TTMessenger/API" as your default SMS Sender ID.

Example Perl script:

```perl
#!/usr/bin/perl
use CGI;
$cgi = new CGI;

my $number    = $cgi->param('number'); # retrieve number
my $message   = $cgi->param('message');     # message
my $time  = localtime(time);

open OUT, ">>smslog.txt";               # write data to log
file
print OUT "$time, $number, $subid, $message\n";
close OUT;

print "Content-type: text/html\n\n";
```

HTTP Delivery Status Notification:

The 'HTTP Delivery Status Notification' feature allows you to receive status reports in real-time for each SMS sent using one of the 'Tracking' Sender IDs.

 In order to receive these notifications, you will need to create a script on your HTTP server. Reports will be submitted to that script via HTTP GET, having the following variables:

subidapi: *The sub-account API ID that delivered the SMS, if any.*

number: *The mobile number of the sender, in international format.*

account: *The account which is receiving the SMS message.*

tt_id: *The unique Tracking number assigned by TraiTel. Only available when the original SMS is sent in 'verbose' mode.*

code: *The current status of the SMS, either:*
0 = Succeeded (Received by mobile)
67 = Failed to delivery (unreachable)
70 = Expired
More status values may be added in the future

message: *A human-readable interpretation of the code.*

job_id: *The Job ID # when delivered using batch mode*

key_id: *The Unique Key used when delivered using batch mode*

In order to enable this feature, log in to your Web-Messaging account, and under 'Developers', select 'SMS via HTTP Settings'. On the SMS via HTTP page, click 'SMS Tracking Forwarding'. There, specify the full URL to your HTTP script. For example: http://www.yourdomain.com/script.cgi .

Your script can be written in any scripting language that can process HTTP GET requests, such as Perl, PHP and ASP.

In order to receive Delivery Status Notifications, you **must** use one of the following Sender-IDs: No Replies / Random ID + Tracking or Replies to TTMessenger/API + Tracking.

Set either of these to the default Sender-ID on your SMS Options page before sending any SMS messages.

Sender-ID and replies:

The Sender-ID, or "reply-to" number that will appear on a recipient's mobile can be changed in your Web-Messaging account. To change your Sender-ID, login to your account via http://www.traitel.com.au

Once logged in, select "SMS" from the menu. Then select "Manage SMS Sender IDs". You will then be able to select which 'Sender-ID' you wish to use by default. You may also add or remove Sender-IDs on this page.

If you wish to receive replies while using **batch mode**, you **must** click on "Make Default" next to "Send replies to TTMessenger/API". You **will not** be able to receive replies to your batch jobs if you are using a custom sender-id. In addition, you must be subscribed to the SMS-Reply service. To subscribe to this service, select "SMS" then click on "Subscribe to SMS Reply"

If you have not selected "Replies to TTMessenger/API" as your default Sender-ID, you will not be able to receive replies to batch-mode SMS messages.

Checking the available balance:

Send an HTTP GET or POST (up to you) to

https://api.traitel.com.au/selfserve.pl or http://api.traitel.com/selfserve.pl if SSL is not possible.

Parameters:

        user :   Your TraiTel username without @traitel.com.au
        pass :   Your password
        mode :   One of the following
                        balance   :   retrieves your balance
                        [more to come]

An example:
https://api.traitel.comau/selfserve.pl?user=username&pass=password&mode=balance